

During the interview, the Examiner questioned whether FIG. 3 of Anderson disclosed tissue that was disconnected or connected. In response, Applicant notes that the only tissue that Anderson describes FIG. 3 as relating to is skin (col. 5, lines 51-52), and skin is not “a portion of a ligament, tendon, or joint capsular tissue,” as recited in claim 57. Further, Anderson does not describe skin as being a “densely collagenous tissue,” which is also recited in claim 57.

During the interview, the Examiner also questioned whether the recited claim language required that the tissue be “naturally joining portions of the body” at the time of applying the RF energy, or if the recited language allowed the tissue to have been naturally joining portions of the body at some time in the past, then disconnected prior to applying the RF energy. As an illustration of this alleged breadth of “naturally joining,” the Examiner asserted that the claim language might be construed to include “tissue which was naturally joining” and “tissue which is naturally joining.”

Applicant notes that the term “joining” is a present participle and, as such, describes a present state. See, for example, [http://learnline.cdu.edu.au/studyskills/wr/wr\\_se\\_pa\\_ve\\_vf.html](http://learnline.cdu.edu.au/studyskills/wr/wr_se_pa_ve_vf.html) (last visited November 3, 2005) which explains that “Present participles describe a present state of affairs. They are usually formed by adding '-ing' onto the end of a verb's infinitive form.” (emphasis added). It is simply not accurate to assert, as the Examiner does, that tissue is “joining” portions if the tissue is, in fact, not joining portions anymore. The Examiner’s proffered construction of “tissue which was joining portions” is an amendment that alters the meaning of the phrase by inserting the past-tense verb “was.” Further, the Examiner’s proffered construction of “tissue which is joining portions” is an amendment that emphasizes the ordinary and implicit meaning of “joining” by inserting the present tense verb “is.”

Therefore, for at least the reasons discussed above, claims 57-62 are patentable over Anderson.

Claims 57 and 61-66 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sand (4,976,709) in combination with Anderson. Applicant respectfully traverses the rejection as explained below.

The applied combination does not disclose or suggest at least “applying a controlled amount of RF thermal energy ... to vascularized, densely collagenous tissue ... to thermally modify the tissue to achieve a controlled modification of a geometry of the tissue” (claim 57,

emphasis added). Rather, Anderson describes the use of laser or RF energy to weld tissue, but does not state that laser and RF energy are "equivalent." Sand describes the use of laser energy to shrink collagen tissue. Neither reference describes or suggests the use of RF energy to shrink collagen tissue. The Examiner is apparently taking the position, similar to the position taken in the previous rejection of the claims over Sand in view of Makower, that Anderson's description of the use of laser energy or RF energy to weld tissue suggests to one of ordinary skill in the art that RF energy can be used in place of laser energy to shrink collagen tissue, as described by Sand. The Examiner is relying on hindsight. There is no description or suggestion in either reference that RF energy can replace laser energy to shrink collagen tissue and, as shown in the previous appeal, replacing one form of energy for another requires such a description or suggestion in order to provide the required motivation to combine the references.

During the interview, the Examiner asserted that Anderson disclosed the equivalence of RF energy and laser energy for heating collagenous tissue generally at column 3, lines 10-14. Applicant disagrees and notes that the passage that the Examiner identifies is qualified by referring only to "aspects of the invention," and the invention applies to welding tissue which occurs at "a temperature below the ... tissue shrinkage temperature" (col. 3, lines 65-67). Thus, no equivalence of energy sources/types is suggested for shrinking collagenous tissue.

During the interview, the Examiner also asserted that FIG. 1 of Anderson suggests the use of RF energy for shrinking collagenous tissue. However, Anderson merely shows that shrinkage occurs at particular temperatures (that are distinct from, and higher than, the welding temperatures), and Anderson does not indicate how those shrinkage temperatures are achieved. Indeed, Anderson stresses that shrinkage temperatures are to be avoided, stating that the desired welding can be achieved "[b]y precisely controlling the temperature to which the collagen-containing materials are heated, i.e., to a temperature at which the free ends of collagen fibrils melt, but substantially below the temperature at which the intact collagen fibrils melt," which is the shrinkage temperature (col. 4, lines 4-9; col. 3, lines 65-67). Because Anderson avoids shrinkage temperatures in his invention, it is not accurate to say, as the Examiner does, that Anderson teaches the use of RF energy to shrink collagenous tissue.

During the interview, the Examiner also noted Sand's teaching that heat and photonic radiation inhibit cross-linking (col. 1, lines 42-46), and asserted that this teaching indicated the

equivalence of RF energy and laser energy for shrinking tissue. Applicant disagrees for at least the reason that this passage does not mention RF energy.

For at least these reasons, claims 57 and 61-66 are patentable over Sand in view of Anderson.

Claim 67 stands rejected "in view of the new grounds of rejection" (Office Action, page 3), however, the Examiner provides no specific rejection in the Office Action. Applicant traverses the rejection, noting that the Office Action does not identify any teaching of "insulating at least some tissue near the vascularized, densely collagenous tissue of at least a portion of a ligament, tendon or joint capsular tissue" (claim 67) in the applied portions of the references. Further, Applicant submits that neither Sand nor Anderson describes or suggests "insulating at least some tissue near the vascularized, densely collagenous tissue of at least a portion of a ligament, tendon or joint capsular tissue" (claim 67). For at least these reasons, claim 67 is patentable over the applied references. During the interview, the Examiner did not find any disclosure in the applied references teaching the recitations of claim 67 and the Examiner requested additional time to consider the claim.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation. Applicant reserves the right to prosecute the rejected claims in further prosecution of this or related applications.

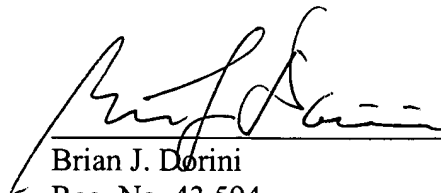
No fees are believed to be due. Please apply any charges or credits to deposit account 06-1050.

Applicant : Hugh R. Sharkey et al.  
Serial No. : 09/664,473  
Filed : September 18, 2000  
Page : 5 of 5

Attorney's Docket No.: 14170-043002 / 25-31-0023

Respectfully submitted,

Date: NOVEMBER 22, 2005

  
\_\_\_\_\_  
Brian J. Dorini  
Reg. No. 43,594

Fish & Richardson P.C.  
1425 K Street, N.W.  
11th Floor  
Washington, DC 20005-3500  
Telephone: (202) 783-5070  
Facsimile: (202) 783-2331

40307247.doc